one very young bird fall in one day and could not rescue it as the boat was away. This bird drowned in about five minutes after a gallant struggle. The heads of young birds are too heavy for the undeveloped muscles of the neck, with the result that the beak and nostrils cannot be held out of the water for more than ten or twenty seconds. The inevitable result was not long delayed in very young birds but when they are older they swim readily and find no difficulty in keeping the nostrils well clear of the water.

These older birds could not return to the top of the jetty, so they were forced to make for the beach. I watched one bird make a landing. There was only a tiny surf running and the young bird was tumbled over and over a number of times but finally righted itself to struggle up the beach. The parent birds were hovering about, making a great fuss. On the beach other dangers quickly made themselves evident. Campers were eager to catch the young birds in order to examine them but usually let them go as soon as their curiosity was satisfied. One boy was going to keep a bird for a pet, but I persuaded him to let it go. One day a dog made his appearance and succeeded in mauling one young bird's wing so that it would never fly. Most birds made for the sea when disturbed and swam out to safety. I think that very few of the young in this colony reached maturity. However this is only an impression of mine since many may have reached Hamelin Island which is about half a mile from the jetty. Once there they would be comparatively safe.

The most puzzling thing about the establishment of the colony is, to me, why the terns came to select such a spot. There is a large rock named Peak Islet a few hundred yards from the jetty; also Hamelin Island is some acres in extent, and some miles to the south there are several low rocky islands that seem to be very suitable for a nesting site. I believe one of these islands is used for nesting by sea birds, but cannot state the species.

The Crested Terns nested on the jetty again in 1947 and I saw them during a visit to Hamelin Bay in late December. I did not have an opportunity of inspecting the nesting site but from information given me by local fishermen there were only a few young remaining and merely several eggs, so that the terns must have commenced activities rather earlier than last year. The number of adult birds appeared to be the same as in 1946. It was also interesting to find that the Sooty Tern was again there—roosting at night with the other terns. It has a very noticeable cry—perhaps similar to a cat is the nearest description I can give.

ABNORMAL NESTS AND EGGS OF WESTERN AUSTRALIAN BIRDS

By F. LAWSON WHITLOCK, Bunbury

As a schoolboy in England I was always greatly interested in the ways and methods of birds at the nesting period. Every spring Rooks *(Corvus frugilegus)* and Lapwings *(Vanellus vanellus)* were closely watched as they were always the first to com-

mence operations. At that time I possessed a small manual on the nests and eggs of British birds. As my knowledge increased I proved it to be fairly accurate.

Later in life I became the proud possessor of Henry Seebohm's "British Birds." This fine work, for which I have still the greatest appreciation, and written mostly from personal notes by one of the greatest field naturalists of his day, naturally greatly increased my enthusiasms and knowledge. I made it a practice to visit some of the localities mentioned and to become acquainted with birds that did not nest in my home area. Alas! my brief annual holidays always proved too short.

It will be gathered from the above that when I came to live in Western Australia in 1901 I was not without previous experience as a bird observer, and I soon recognised such birds as the Reed-warbler and the so-called robins as representing familiar birds in my new surroundings. Birds of prey and the crow family also reminded me of old friends. At the same time there was much that was new to arouse my keen interest. An opportunity came along in time, and I had the pleasure and privilege of collecting birds with their eggs and nests for the Western Australian Museum.

It was not long before one fact struck me. I found that English birds, especially the numerous small species, regularly laid a greater number of eggs than do most Western Australian birds of the same size. At the same time, as was natural, during a long residence in Western Australia I have come across occasional nests containing an unusual number of eggs. The greatest number of eggs I remember finding in one nest in England was twenty-two in a nest of the Grey Partridge *(Perdix perdix)*. This was matched, but to a lesser extent, in Western Australia by fourteen eggs in the nest of a Swamp Quail *(Synoicus australis)* I found at Young's Siding. I was able to photograph the latter nest and each egg is visible in the print. The whole clutch was hatched out by the mother bird and got away safely. When I was on the Nullarbor Plain collecting on behalf of the late H. L. White, I found a nest of the Painted Quail *(Turnix varia)*. The eggs, or rather their remains, were in the depression that usually constitutes a nest and I was able to piece together seven or eight of the larger fragments. Usually I have found but four to be the full clutch. It was a good season and out of four nests of the Nullarbor Quail-thrush *(Cinclosoma alisteri)*, three contained three eggs each in place of the usual Quail-thrush's two.

The little Chestnut-eared Finch *(Taeniopygia castanotis)* is a sociable bird. I counted 13 occupied nests in one large *Hakea* bush, near Wiluna in the East Murchison. But this little finch will breed in almost any situation. I once found a nest with eggs in a post and rail fence. At Marble Bar it is a very common bird where there is water. A young aboriginal boy who attached himself to me reported "plenty egg" in a small hole he had climbed up to in a gum tree. I threw him up my cap to put the eggs in. It contained twenty-three of the usual white eggs when he handed the

cap down. This was a combination clutch probably due to a scarcity of nesting sites near at hand.

But it must often happen that one of a pair of breeding birds is killed or dies from some cause or other. A new mate is soon found and sometimes the same nesting site is used. On the Moore River, near Mogumber, I climbed to a nest of the White-faced Heron *(Notophoyx novae-hollandiae)*. It contained eight eggs in place of the usual three or four, and it was at once evident that there were two clutches—one fresh and clean, newly laid, and the other soiled. I judged this a case of death or desertion on the part of the first female. The nest of a Kestrel *(Falco cenchroides)* I found on the Coongan River, twenty miles from Marble Bar, contained two easily distinguished sets laid by the same female.

In England the true tits—Paridae—all lay a large number of eggs. They are small birds, the Long-tailed Tit *(Aegithalos caudatus)* being the smallest. It builds a wonderfully beautiful nest which accommodates from ten to twelve young birds. The species of our genus *Acanthiza* should never be termed tits; thornbill is a very good vernacular name. The Australian representatives of the tits are the several species of Whiteface *(Aphelocephala)*. They are not conspicuous in laying large clutches of eggs, but they are unsurpassed in accommodating themselves to circumstances when choosing a nesting site. The most remarkable instance of this was an occupied nest with eggs I found in a half-opened fruit tin lying on the ground at Wurarga, near Yalgoo. On the Nullarbor Plain, near Naretha, a pair had made a snug house in a roll of wire netting. Other nests I have found were built in recumbent logs, in holes in dead timber, in the roof of a tool-shed and not infrequently in abandoned or empty nests of the White-browed Babbler *(Pomatostomus superciliosus)*. These huge structures are fairly common and one would have hardly expected a keen observer like the late A. W. Milligan to have attributed them, as he once did, to a small bird architect like the Whitefaces.

I have mentioned earlier fatalities leading to the death of the male or female. On the Missionary Plain, Central Australia, in one limited area I found what might be termed a colony of the Thick-billed Grass-wren *(Amytornis modesta)*. These remarkable hopping birds—for they seldom take wing—build three types of nests: firstly, the ordinary cup-shaped structure; secondly, a half-domed nest, and lastly, a fully-domed nest with a side entrance. In one of the last type I found four eggs—obviously two pairs from their colour pattern. This was confirmed on finding one pair partially incubated and the other quite fresh. It was apparently a case of an *Amytornis* marriage with a deceased wife's sister!

The common Sparrow-hawk *(Accipiter nisus)* in England regularly lays six eggs. The pattern of the eggs runs in pairs. Firstly, there may be two with the dark markings massed at the thick end; secondly, a pair with blotches, not spots, well distributed over the whole egg, and lastly, a pair with small markings equally

well distributed. In Western Australia I have never found more than four eggs laid by our Sparrow-hawk *(Accipiter cirrocephalus)*.

With the Kestrels I find this difference. In England five eggs are the rule, with the red falcon-like markings distributed thickly all over the shell, but in Western Australia our Nankeen Kestrel usually lays four, and I find the ground colour as a rule easily visible, the markings often being in blotches or in innumerable small spots.

OBSERVATIONS ON THE MOUNTAIN DEVIL

(Moloch horridus)

By S. R. WHITE, Government School, Coorow.

Shortly after my arrival at Coorow, early in February 1947, I became attracted by the abundance of the *Moloch* throughout most of the sandplain areas, and particularly on a sandplain adjacent to the town. In order to observe specimens at close quarters I constructed a number of small four-walled portable enclosures. These were without either top or bottom, and could be placed over suitably situated ant trails. Numerous *Molochs* were held captive in these boxes for periods up to three months, and were then liberated.

Most specimens on capture were infested with small ticks, which were usually found attached to softer parts of the body, beneath the joints of the limbs and about the eyes. Some newly captured individuals struggled vigorously to escape while being handled, but others assumed a "freeze." In this attitude, the head and tail collapse into a horizontal position so that the throat, belly and under tail rest upon the ground, and the eyes are shut. Occasionally individuals found in the free state adopted this stance, apparently as a protective reaction, but others scuttled for cover.

Unfortunately many of the illustrations depicting this little reptile show it in the collapsed posture, thus creating in the minds of those who do not know it in the field quite a wrong impression of its "personality". This impression may also be supported by the fact that so many of the specimens seen "on exhibition" are displayed under conditions quite artificial to the creature's natural environment. It reacts accordingly. To my experience the *Moloch's* agility reflects completely the temper of the sunshine. At the hottest time of day, I often found one advancing across a bare sandpatch; the peculiar rocking hesitant motion punctuated with short scrambling runs. The head and tail are both raised to form with the body an almost perfect arc, and the movement is almost mechanical. The general impression is both grotesque and comical.

Captive *Molochs* were only seen to eat the one type of ant, . . . a small black species very common in these parts. They were taken by a rapid flicking action of the tongue. One individual was observed to consume 120 ants during a five minute period, but as the ant trail upon which it was feeding was not a particularly good one, I believe that this is below the normal rate of feeding.